

objected to informalities in the specification on page 3, line 12. Specifically, the Examiner required that the elements of claim one be stated explicitly.

Reconsideration is requested.

The Applicant has amended the specification to disclose the elements of claim 1 where the Examiner indicated it was required.

In paragraph 4 of the Office Action, the Examiner objected to claims 1-7 due to informalities found in claims 1, 4 and 5.

Reconsideration is requested.

Applicant has amended claims 1, 4 and 5 by deleting language referring to a 'buffer' where the term 'absorbing element' alone is sufficient to include what the Applicant intended by the term 'buffer.'

In paragraph 6 of the Office Action, the Examiner rejected claims 3-5 under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Reconsideration is requested.

Applicant has amended claim 3 to point out the particular subject matter claimed with respect to the cross member element of that claim. In this regard, Applicant has more specifically pointed out the limitations of the linear shape of the present invention.

Applicant has amended claims 4 and 5 by deleting the phrase 'such as' and by including language that makes clear the claimed invention.

In paragraph 8 of the Office Action, the Examiner rejected claims 1, 3, 6 and 7 under 35 U.S.C. § 102(b) as being anticipated by Terada et al., U.S. Patent No. 5,078,439 (Terada).

Reconsideration is requested.

Applicant has amended claim 1 to include the limitations, disclosed in the specification, that distinguish the present invention from Terada. Specifically, the present invention comprises a substantially linear front cross member with a unitary, fillable internal chamber. The linear shape of

the cross member is not disclosed in Terada. The unitary, fillable internal chamber is not disclosed in Terada. Terada discloses a "box shaped" bumper reinforcement, 13, with four outside walls and an intermediate wall which connects the upper wall and lower wall. The amended claims point out a unitary internal chamber, whereas the Terada patent discloses an internal chamber bifurcated by the intermediate wall which connects the upper wall and lower wall. Accordingly, amended claim 1 incorporates at least two differences not disclosed or suggested by Terada. Applicant respectfully submits therefore that claim 1 and dependent claims 3, 6 and 7 are not anticipated by Terada, et. al.

In paragraph 10 of the Office Action, the Examiner rejected claims 2 and 4 under 35 U.S.C. § 103(a) as being unpatentable over Terada view of Shiotani et al. U.S. 3,842,944 (Shiotani).

Reconsideration is requested.

The present invention relates to a novel protective device for vehicles comprising a linear cross member that is particularly configured for the placement of absorber elements, 16, and further centrally located absorber systems on the front end of the cross member, and with absorber elements located within the cross member. This novel invention provides superior impact protection, particularly with respect to pedestrians, not disclosed or contemplated by combination of the prior art disclosures. Moreover, only the present invention provides improvements in overall dimension and weight of the protective device. Prior to the weight and dimension benefits provided by the present invention, there was no practical means for incorporating a second absorber system inside the cross members of protective devices for vehicles. Terada does not describe

As noted above, Terada discloses a "box shaped" bumper reinforcement, 13, with four outside walls and an intermediate wall which connects the upper wall and lower wall. This recitation speaks only to the cross sectional configuration of the Terada bumper reinforcement. Terada is limited to the disclosure of a device having an internal chamber bifurcated by

the intermediate wall which connects the upper wall and lower wall. Shiotani merely describes a metallic shock absorber which is a hollow structure which is filled with a foamed metal. Nothing in Shotani, when considered alone or in combination suggests the claimed invention as defined by the amended claims.

In paragraph 11 of the Office Action, the Examiner rejected claim 5 as being unpatentable over Terada as applied to claim 2 and further in view of Carbone et al. U.S. 3,744,835 (Carbone).

Reconsideration is requested.

Claim 5 of the present invention depends on claim 2 and provides further unobvious limitations which are directed to the use of prior art materials that are not used in the structure of the primary reference, Terada. Neither Terada nor Carbone disclose or suggest the novel use of the honeycomb absorbing materials as an exterior absorbing system configured upon the present linear, smaller, lightweight cross member containing inside a second absorber system comprised of the same materials. This particular configuration was not practical for protective structures for vehicles prior to the present invention. For these reasons, it is requested that this ground of rejection be withdrawn.

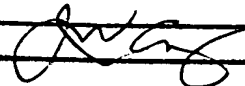
An early and favourable action is earnestly solicited.

Respectfully Submitted

  
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Marked Up Copy Of Amended Specification:

Page 3, line 8, rewrite the paragraph as follows:

This and other aims, according to the present invention, are achieved by producing a protective structure for vehicles, designed to be used particularly in the event of impact with pedestrians, according to claim 1, [which is here referred to for the sake of brevity] comprising a substantially linear front cross member (17A) comprising a unitary fillable internal chamber, where said front cross member is connected to lateral side members (22), and featuring at least one first absorber element [or buffer] (16), connected externally after the cross member (17A) on the bumper side of the vehicle.

Marked Up Copy of Amended Claims:

1. (Amended) Protective structure for vehicles, characterised in that it comprises a substantially linear front cross member (17A) comprising a unitary fillable internal chamber, wherein said front cross member is connected to lateral side members (22), and featuring at least one underlying laterally-placed first absorber element [or buffer] (16), connected externally after the cross member (17A) on the bumper side of the vehicle.

3. (Amended) Protective structure for vehicles as in claim 1, characterized in that said cross member (17A) has a substantially straight geometrical [physical-geometrical] structure [and weight modified with respect to traditional type cross members] which is fitted with curved bumpers conforming in shape to said underlying laterally-placed first absorber element (16) and having a centrally-placed absorber system interposed between said bumper and said cross member.

4. (Amended) Protective structure for vehicles as in claim 2, characterised in that said underlying laterally-placed first absorber element (16) and said second absorber element (25) [buffer] are made of materials [with characteristics such as to

obtain] deformation pressures of 5-30 N/mm2 which correspond[ing] to a crushing of 50%.

5. (Amended) Protective structure for vehicles as in claim 2, characterised in that said first underlying absorber element (16) and said second absorber element [buffer] (25) comprise absorbing materials [such as] selected from the group consisting of extruded thermoplastic honeycomb, honeycomb made of aluminium, polyurethane foam, foamed polypropylene, rigid polyurethane, [or] semi-rigid polyurethane [or] and extruded polyurethane.